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| 10/609,235 | 06/27/2003 | Richard Dryer | 02W192 | 7732 |

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EXAMINER

NGUYEN, TRINH T

ART UNIT PAPER NUMBER

3644

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/609,235

Applicant(s)

DRYER ET AL.

Examiner

Trinh T Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment on 1/6/05.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-24 is/are pending in the application.
- 4a) Of the above claim(s) 16-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-15, 23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 7-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 7: "the propelling charge holder segments" lack proper antecedent basis.

In claim 8: "the propelling charge holder segments" lack proper antecedent basis.

In claim 9: "the propelling charge holder segments" lack proper antecedent basis.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 2-5, and 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Andersson (US 5,175,393).

For claim 2, Andersson discloses a projectile comprising: a projectile body (4); and a propelling charge holder (5,25,24,6,7) separably coupled to the projectile body; and external propelling charge increments (10) at least partially surrounding the propelling charge holder; wherein the propelling charge holder includes multiple propelling charge holder segments (5,25,24,6,7) are separable from one another during

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flight of the projectile (due to break zones 11 and 27 the holder will be separable during the flight of the projectile).

For claim 3, Andersson discloses an internal propelling charge increment (8a) in a chamber enclosed by the propelling charge holder.

For claim 4, Andersson discloses the segments have holes (7a) therein that allow communication between the chamber and the external propelling charge increments.

For claim 5, Andersson discloses an igniter holder and an igniter (9) that are both at least partially in the chamber.

For claim 12, Andersson discloses a projectile comprising: a projectile body (4); a propelling charge holder (5,25,24,6,7) separably coupled to the projectile body; and external propelling charge increments (10) at least partially surrounding the propelling charge holder; wherein the propelling charge holder segments have a curved free shape; and wherein an inward radial force provide by the propelling charge increments is applied to the propelling charge holder segments to combine them to form the propelling charge holder (note that when one inserts the propelling charge increments onto the propelling charge holder segments an inward radial force is inherently applied onto the segments).

For claim 13, note that a fair reading of the claim language (i.e. "the fins may be retracted or deployed") permits the Examiner to interpret that the fins are deployed and therefore the claim language "wherein at least part of the inward radial force is supplied by the fins when the fins are retracted" is moot since in this case the fins are retracted.

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For claim 14, Andersson discloses an igniter holder with an annular flange; wherein at least part of the inward radial force is supplied by the annular flange (see Figure 2 attached at the end of this Office Action for further explanation).

For claim 15, Andersson discloses hooked ends (24a) of the propelling charge holder segments engage a flange (25) on an aft protrusion of the body, when the inward radial force is applied to the propelling charge holder segments, and wherein removal of the inward radial force causes disengagement of the hooked ends from the flange (note that an inward radial force must be applied and/or removed into the hooked ends in order to assemble and/or dismantled the hooked ends from the flange).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6-11, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andersson (US 5,175,393) in view of Brandt (US 1,879,840).

Andersson discloses most of the claimed invention except for fins hingedly coupled to the body.

Brandt teaches a similar projectile as that of Andersson in which Brandt's projectile having a plurality of fins hingedly coupled to the body (see Figure 11 and 13) so as to improve the overall aerodynamic of the projectile by allowing the fins to be retracted and/or deployed due to the hinge structure. It would have been obvious to

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one having ordinary skill in the art at the time the invention was made to have modified the projectile of Andersson so as to include the use of hinged fins, in a similar manner as taught in Brandt, since to do so would improve the overall aerodynamic of the projectile by allowing the fins to be retracted and/or deployed due to the hinge structure.

For claim 6, Andersson as modified by Brandt (emphasis on Andersson) further discloses fins (12) is coupled to the body forward of the propelling charge holder. Also, note that a fair reading of the claim language (i.e. "the fins may be retracted or deployed") permits the Examiner to interpret that the fins are deployed.

For claim 7, note that a fair reading of the claim language (i.e. "the fins may be retracted or deployed") permits the Examiner to interpret that the fins are deployed and therefore the claim language "wherein the fins, when retracted, press against the propelling charge holder segments of the propelling charge holder" is moot since in this case the fins are retracted.

For claim 8, as best understood, Andersson as modified by Brandt (emphasis on Andersson) further discloses the central portion (25,5) of the propelling charge holder segments is closer to a centerline of the projectile than ends of the propelling charge holder segments. Also, note that a fair reading of the claim language (i.e. "the fins may be retracted or deployed") permits the Examiner to interpret that the fins are deployed and therefore the claim language "the fins press against a central portion of the propelling charge holder segments" is moot since in this case the fins are retracted as stated in claim 7 (currently amended).

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For claim 9, as best understood, Andersson as modified by Brandt (emphasis on Andersson) further discloses one of the ends of each of the propelling charge holder segments is a hooked end (24a) that engages an aft protrusion (25) of the projectile body.

For claim 10, as best understood, Andersson as modified by Brandt (emphasis on Andersson) further discloses the aft protrusion includes a flange that is engaged by the hooked ends.

For claim 11, note that a fair reading of the claim language (i.e. "the fins may be retracted or deployed") permits the Examiner to interpret that the fins are deployed and therefore the claim language "the fins each have a notch into which the hooked ends at least partially protrude when the fins are retracted" is moot since in this case the fins are retracted.

For claim 23, Andersson as modified by Brandt (emphasis on Andersson) further discloses a projectile comprising: a projectile body (4); a propelling charge holder (5,25,24,6,7) coupled to the projectile body; external propelling charge increments (10) at least partially surrounding the propelling charge holder; and fins (12) coupled to the body; wherein the fins may be retracted or deployed (note that a fair reading of the claim language (i.e. "the fins may be retracted or deployed") permits the Examiner to interpret that the fins are deployed and therefore the claim language "wherein blades of the fins each have a notch into which parts of the projectile protrude when the fins are retracted" is moot since in this case the fins are retracted).

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For claim 24, Andersson as modified by Brandt (emphasis on Andersson) further discloses the propelling charge holder includes multiple propelling charge holder segments (5,25,24,6,7) that are separable from one another during flight of the projectile; and wherein the separable segments are at least partially surrounded by the propelling charge increments (due to break zones 11 and 27 the holder will be separable during the flight of the projectile).

Response to Arguments

7. Applicant's arguments with respect to claims 2-15 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

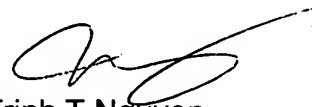
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trinh T Nguyen whose telephone number is (703) 306-9082. The examiner can normally be reached on M-F (9:30 A.M to 6:00 P.M).

The examiner's supervisor, Teri Luu can be reached on (703) 305-7421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Trinh T Nguyen
Patent Ex.
Art Unit 3644
3/18/05

